BASNET SERVES BELARUSIAN NREN

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Being a pioneer in bringing Internet to Belarus research community, the National Center of Informational Resources and Technologies is currently operating Belarusian National Research Network (NREN) — BASNET — that is affiliated with the National Academy of Sciences of Belarus (see www.terena.nl). What is the current state of the network?

For years we have been the main partner of the National PTT — "Beltelecom" to serve R&D institutions in Belarus. Note that there are over 50 and service providers in Belarus and the above institutions — Beltelecom and the National Center of Informational Resources and Technologies — are the only two international connectivity providers.

The principal goal of BASNET is to provide Belarusian research and education community with:

– high-speed Internet and GEANT services;
– exchange of scientific information;
– access to scientific-technical resources.

Thus, the National Center is involved in a number of activities relating to research networking development. They include telematics applications and network architecture development, advanced solutions testing, implementation and utilization of new technologies as well as support of research projects having specific networking requirements.

Since the beginning of 2004 due to the support of the European Commission and the Polish Academy of Sciences, Poznan Supercomputing and networking Center, BASNET obtained free of charge 34 Mbps link to the multi-gigabit pan-European data communications network GEANT created specifically for research and education purposes.

BASNET containes 14 basic networking nodes located in Minsk that are connected via fiber-optic channels providing speed up to 10 Gbps and 5 regional centers (each 2 Mbps) covering all Belarusian regions. The network has in operation over 40 CISCO routers (including series 7500 and 7200), owns 40 km of fiber optical channels. All the rest are rented from Beltelecom to organize backbone of 100–1000 Mbps.

BASNET unites over 100 Research and Educational institutions and universities that are linked to one of the basic nodes directly; and over 5 large-scale corporation networks of other Ministries to provide high QoS for over 30000 users.

Among our customers are practically all institutions of National Academy of Sciences of Belarus, key universities of the Ministry of Education linked via their Internet service providers BSU and UNIBEL, Ministry of Industry, Ministry of Health, Ministry of Trade, State Committee for Military Industry, Ministry of Extraordinary Cases, State Committee of Science and Technology, etc.

Some organizations located far from the backbone are linked implementing Radio Ethernet technology by speed 2–11 Mbps.

BASNET provides its customers free services such as software repository, unified library e-catalogue, access via corporative librations system to digital full-text publications of over 40000 magazines (in total over 5 Mio publications), E-educational courses on specialty "Computer Engineering" developed in cooperation with the MAU, Germany and BSU.

Currently the National Center in cooperation with Ceenet is involved in developing the project Porta Optical study project under EC support to improve bandwidth of BASNET international connectivity to GEANT and Internet.

It is supposed that a direct cross-boarder link will be set up to interconnect Belarusian and Polish Academies that serve the National Research Networks. In order to support Belarus Polish Academy of Sciences is eager to create a transnational node directly on the Belarus-Polish boarder.